

# Exhibit B

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF SOUTH CAROLINA  
AIKEN DIVISION

Milton Lewis v. Norfolk Southern Railroad,  
Inc.

C.A.No.:1:07-3231-MBS

**AFFIDAVIT OF JAY GANDY, PhD**

PERSONALLY APPEARED BEFORE ME, Dr. Jay Gandy, who being duly sworn,  
deposes and states:

CTEH Air Monitoring Post Derailment

1. I am a Senior Toxicologist with the Center for Toxicology and Environmental Health, L.L.C. ("CTEH"), as well as Professor and Chair of the Department of Environmental and Occupational Health of the University of Arkansas for Medical Sciences.

2. CTEH, of which I am one of the founding owners, is a science-based company established to provide toxicology and environmental health consulting services, specializing in toxicology, risk assessment, industrial hygiene, and occupational health, including responses to emergencies or other events involving chemical releases or threatened releases and emergence response planning.

3. CTEH was hired by Norfolk Southern Railway Company to conduct efforts associated with the train derailment that occurred in Graniteville, South Carolina. Those efforts included air monitoring and sampling, public health protection, property inspections (homes, vehicles, and any other potentially impacted structures), and other field sampling, as well as the inspections and sampling associated with re-occupation of the evacuation zone.

4. I have personal knowledge of the facts stated in this affidavit and the information stated herein is true and accurate to the best of my knowledge.

5. As the most senior individual overseeing CTEH's work, CTEH personnel reported to me. I was also involved in the actual field work that CTEH undertook. Accordingly, I am knowledgeable about the efforts undertaken by CTEH, the observations made in the field, and the data collected by field monitoring, sampling, and testing.

6. CTEH conducted air monitoring and sampling began on January 6, 2005 for more than two weeks. The air monitoring and sampling efforts undertaken by CTEH included both real-time air monitoring and integrated air sampling, as well as continuous, real-time meteorological monitoring.

7. Real-time air monitoring utilizes direct reading instruments to obtain nearly instantaneous readings. CTEH undertook real-time air monitoring with chlorine electrochemical sensors, colorimetric detector tubes, and Chemcassette colorimetric detectors. Real-time

monitoring efforts began on January 6, 2005 in areas that included the immediate area of the derailment and the surrounding evacuated zones. Radio-telemetry systems incorporated with real-time air monitoring equipment were also established on January 6, 2005, at which time CTEH began to conduct continuous radio-telemeted real-time air monitoring, as well.

8. Integrated air sampling, which involves collecting samples and sending those samples to a laboratory for analysis, also began on January 6, 2005, as did the real-time meteorological monitoring.

9. CTEH selected its monitoring and sampling locations in coordination with the U.S. Coast Guard and the U.S. Environmental Protection Agency (USEPA) and communicated the results to USEPA. In addition, both the U.S. Coast Guard and USEPA conducted their own air monitoring (see Exhibit A, which delineates real-time monitoring locations for both CTEH and USEPA).

10. Exclusion zones had been established in Graniteville in the early morning hours of January 6, 2005, prior to the arrival of CTEH. Although the monitoring and sampling efforts were more comprehensive, one of the initial uses of CTEH's air monitoring results was to verify that the exclusion zone perimeters were sufficient to be protective of public health by demonstrating that air concentrations of chlorine were not detectable at the perimeter of the exclusion areas.

11. Through the completion of the response efforts, CTEH undertook monitoring and sampling efforts throughout, and well beyond, the potentially impacted areas, with a significant number of stations being established near the derailment site. CTEH also adjusted the locations of the sampling and monitoring stations or locations where changes in circumstances warranted, such as completion of repair work to the damaged train car, and reoccupation of evacuated areas, and reopening of roads.

12. All total, CTEH stationed air monitors and integrated sampling at numerous locations around the derailment work zone and the surrounding community, generating over 1.6 million air monitoring readings for chlorine.

13. With the use of air monitoring, CTEH was able to monitor for the presence of chlorine in the Graniteville area. After January 12, 2005, the presence of chlorine in Graniteville was at best negligible for a limited period of time. If there was any chlorine in the air, it was not of a level to cause injury.

14. Additionally, exposure to chlorine was not possible by the time the official evacuation orders were lifted and the Avondale Mills plants and surrounding homes were available for re-entry since the source of chlorine release had been contained and eliminated. This occurred six (6) months prior to Milton Lewis' entry into the Gregg plant of Avondale Mills on July 20, 2005.

15. CTEH did not find any detectable levels of chlorine in Graniteville attributable to the derailment after the evacuation orders were lifted and reoccupation of the homes and businesses in the affected areas began.

#### Reactive Nature of Chlorine

16. Chlorine is a highly reactive chemical. It is not latent. It immediately reacts with any component with which it interacts – whether it is dew in the air, a metallic surface or an individual's mucous membranes.

17. When chlorine comes into contact with a corrodible surface, such as brass, aluminum, copper, or iron, it oxidizes to form a chloride salt. This is an immediate chemical reaction and not one that occurs over the course of time. Once oxidization occurs, there is no inhalation hazard for individuals working with and around surfaces corroded by chlorine. There were also no odor or detectable levels of chlorine in the air following formation of a chloride salt.

18. CTEH<sup>®</sup> took numerous surface pH samples throughout the Graniteville area. There was no indication of chlorine or acid deposition on surfaces, other than chloride salt formation.

#### Supervision of Cleaning of Avondale Mills Plants

19. I personally entered the Avondale Mill Gregg plant and was present during the initial cleaning conducted by Belfor USA, which took place from January 17, 2005 through April 2005, months before Milton Lewis joined another cleaning effort in July 2005. During the time that I was in the plant, there were no detectable air levels of chlorine or even detectable chlorine odors. No complaints were reported to me of chlorine inhalation by any of the Belfor USA workers involved in the cleaning efforts during the time of their cleaning of the Avondale Mills plants.

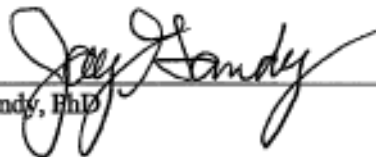
20. No one present wore respiratory protective gear while in the plants after January 17, 2005, including myself (although some people may have worn routine dust masks). I have reviewed the transcript of Milton Lewis' deposition testimony. The protective gear he describes wearing was not necessary to safeguard against exposure to chlorine more than six (6) months following the incident.

#### Interaction of Chlorine with Cleaning Agents

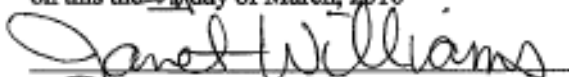
21. Plaintiff testified he cleaned the surfaces at the Avondale Mill plant with soap and water. I have reviewed the MSDS sheets of Brulin and KR-25, the two products which were used as cleaning agents by Mr. Lewis, according to the testimony of Mike Detenancour and Mike Neal, and the Crew Assignment sheets they prepared each day. There are no chemicals contained in these products that could have caused a reaction with any surface corroded by chlorine resulting in inhalable toxic fumes. There was no inhalation hazard through the cleaning process described in the depositions of Milton Lewis, Mike Detenancour and Mike Neal.

22. It is therefore not plausible Milton Lewis was exposed to chlorine and inhaled it in July 2005.

23. I certify and acknowledge that I am signing this affidavit under oath and under penalty of perjury.

  
Jay Gandy, PhD

SUBSCRIBED AND SWORN TO BEFORE ME  
on this the 30<sup>th</sup> day of March, 2010

  
Notary Public in and for  
the State of Arkansas

**My Commission Expires**  
**01-05-2011**

My Commission Expires: 01-05-2011



## **EXHIBIT A**



